

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Currently Amended) An intracorporeal device comprising:
 - a) a helically wound coil having a plurality of windings forming a coil length and defining a longitudinal coil axis extending along the coil length; and
 - b) at least ten joining elements disposed along the coil length, wherein each joining element is located at a longitudinal position along the coil length relative to the coil axis and couples two or more coil windings, wherein the longitudinal position of at least one of the at least ten joining elements is longitudinally offset from the longitudinal position of at least one other joining element along the coil length.
2. (Canceled)
3. (Withdrawn) The intracorporeal device according to claim 1, wherein the joining elements form a non-uniform pattern along the coil length.
4. (Withdrawn) The intracorporeal device according to claim 3, wherein the joining elements have a density of joining elements per unit coil length that decreases along the coil length.
5. (Withdrawn) The intracorporeal device according to claim 4, wherein the density of joining elements per unit coil length decreases in the distal direction along the coil length.
6. (Previously presented) The intracorporeal device according to claim 1, wherein the joining elements form a uniform pattern of joining elements along the coil length.

7. (Original) The intracorporeal device according to claim 1, wherein each joining element couples 3 to 10 coil windings.

8. (Original) The intracorporeal device according to claim 1, wherein each joining element is a discrete element aligned orthogonal to the windings.

9. (Original) The intracorporeal device according to claim 1, wherein each joining element is a discrete element having a width in the range of 0.1 to 0.5 mm and a length in the range of 0.1 to 1.5 mm.

10. (Currently Amended) An intracorporeal device comprising:

a) a helically wound coil having a plurality of windings forming a coil length and defining a longitudinal coil axis extending along the coil length; and

b) a plurality of joining elements disposed longitudinally along the coil length, wherein each joining element only couples two or more coil windings, and wherein at least one of the plurality of joining elements is longitudinally offset from at least one other joining element along the coil length as viewed from a direction transverse to the coil axis.

11. (Original) The intracorporeal device according to claim 10, wherein the plurality of joining elements includes at least 10 elements disposed along the coil length.

12. (Withdrawn) The intracorporeal device according to claim 10, wherein the plurality of joining elements form a non-uniform pattern of joining elements along the coil length.

13. (Withdrawn) The intracorporeal device according to claim 12, wherein the plurality of joining elements has a density of joining elements per unit coil length that decreases along the coil length.

14. (Withdrawn) The intracorporeal device according to claim 13, wherein the density of joining elements per unit coil length decreases in the distal direction along the coil length.

15. (Original) The intracorporeal device according to claim 10, wherein the plurality of joining elements form a uniform pattern of joining elements along the coil length.

16. (Original) The intracorporeal device according to claim 10, wherein each joining element couples 3 to 10 coil windings.

17. (Original) The intracorporeal device according to claim 10, wherein each joining element is a discrete element aligned orthogonal to the windings.

18. (Original) The intracorporeal device according to claim 10, wherein each joining element is a discrete element having a width of 0.1 to 0.5 micrometer and a length of 0.1 to 1.5 mm.

19. (Currently Amended) An intracorporeal device comprising:

a) a helically wound coil having a plurality of windings having an outer perimeter and forming a coil length; and

b) a plurality of joining elements disposed on only a portion of the outer perimeter and along the coil length, wherein each joining element couples two or more coil windings, and wherein at least one of the plurality of joining elements is longitudinally spaced apart from at least one other joining element ~~with no longitudinal overlap~~, wherein the at least one joining element does not couple to any of the two or more coil windings coupled by the at least one other joining element.

20. (Original) The intracorporeal device according to claim 19, wherein the plurality of joining elements includes at least 10 elements disposed along the coil length.

21. (Withdrawn) The intracorporeal device according to claim 19, wherein the plurality of joining elements form a non-uniform pattern of joining elements along the coil length.

22. (Withdrawn) The intracorporeal device according to claim 21, wherein the plurality of joining elements has a density of joining elements per unit coil length that decreases along the coil length.

23. (Original) The intracorporeal device according to claim 19, wherein the plurality of joining elements form a uniform pattern of joining elements along the coil length.

24. (Original) The intracorporeal device according to claim 19, wherein each joining element couples 3 to 10 coil windings.

25. (Original) The intracorporeal device according to claim 19, wherein each joining element is a discrete element aligned orthogonal to the windings.

26. (Original) The intracorporeal device according to claim 19, wherein each joining element is a discrete element having a width of 0.1 to 0.5 mm and a length of 0.1 to 1.5 mm.

27. (Original) The intracorporeal device according to claim 19, wherein each joining element is disposed on less than 1/10 of the outer perimeter of each winding.

28. (Currently Amended) A medical device comprising:
a) an elongate shaft having a proximal end and a distal end;
b) a helically wound coil having a plurality of windings having an outer perimeter and forming a coil length disposed about a portion of the distal end of the elongate shaft; and
c) a plurality of joining elements disposed on only a portion of the outer perimeter and along the coil length, wherein each joining element couples two or more coil

windings, and wherein at least one of the plurality of joining elements is ~~longitudinally offset from~~ disposed more distal than at least one other joining element.

29. (Original) The medical device according to claim 28, wherein the plurality of joining elements includes 10 elements disposed along the coil length.

30. (Withdrawn) The medical device according to claim 28, wherein the plurality of joining elements form a non-uniform joining element pattern along the coil length.

31. (Withdrawn) The medical device according to claim 30, wherein the plurality of joining elements has a density of joining elements per unit coil length that decreases along the coil length.

32. (Original) The medical device according to claim 28, wherein the plurality of joining elements form a uniform joining element pattern along the coil length.

33. (Original) The medical device according to claim 28, wherein each joining element couples 3 to 10 coil windings.

34. (Original) The medical device according to claim 28, wherein each joining element is a discrete element aligned orthogonal to the windings.

35. (Original) The medical device according to claim 28, wherein each joining element is a discrete element having a width of 0.1 to 0.5 mm and a length of 0.1 to 1.5 mm.

36. (Currently Amended) A guidewire comprising:
a) an elongate shaft having a proximal end and an opposing distal end;
b) a helically wound coil having a plurality of windings having an outer perimeter and forming a coil length disposed about a portion of the distal end; and

c) a plurality of joining elements disposed on only a portion of the outer perimeter and along the coil length, wherein each joining element couples two coil windings, and wherein at least one of the plurality of joining elements is ~~longitudinally spaced apart from~~ disposed closer to the proximal end than at least one other joining element with no longitudinal overlap.

37. (Original) The guidewire device according to claim 36, wherein the plurality of joining elements includes 10 elements disposed along the coil length.

38. (Withdrawn) The guidewire device according to claim 36, wherein the plurality of joining elements form a non-uniform joining element pattern along the coil length.

39. (Withdrawn) The guidewire device according to claim 38, wherein the plurality of joining elements has a density of joining elements per unit coil length that decreases along the coil length.

40. (Original) The guidewire device according to claim 36, wherein the plurality of joining elements form a uniform joining element pattern along the coil length.

41. (Original) The guidewire device according to claim 36, wherein each joining element couples 3 to 10 coil windings.

42. (Original) The guidewire device according to claim 36, wherein each joining element is a discrete element aligned orthogonal to the windings.

43. (Original) The guidewire device according to claim 36, wherein each joining element is a discrete element having a width of 0.1 to 0.5 mm and a length of 0.1 to 1.5 mm.

44. (Withdrawn) The guidewire according to claim 39, wherein the helically wound coil has a proximal end and a distal end and where the density of joining elements per unit length decreases from the proximal end to the distal end.

45. (Withdrawn) A guidewire comprising:

- a) an elongate shaft having a proximal end and an opposing distal end;
- b) a helically wound coil having a plurality of windings having an outer perimeter and forming a coil length disposed about a portion of the distal end; and
- c) a plurality of joining elements disposed on only a portion of the outer perimeter and along the coil length, wherein each joining element couples two coil windings;
- d) a second coil having a plurality of windings circumferentially disposed about the first coil wherein the joining elements couple a plurality of second coil windings to adjacent first coil windings.

46. (Withdrawn) The guidewire device according to claim 45, wherein the plurality of joining elements includes at least 10 elements disposed along the coil length.

47. (Withdrawn) The guidewire device according to claim 45, wherein the plurality of joining elements form a non-uniform joining element pattern along the coil length.

48. (Withdrawn) The guidewire device according to claim 45, wherein the plurality of joining elements form a uniform joining element pattern along the coil length.

49. (Withdrawn) The guidewire device according to claim 45, wherein each joining element couples 3 to 10 coil windings.

50. (Withdrawn) The guidewire device according to claim 45, wherein each joining element is a discrete element aligned orthogonal to the windings.

51. (Withdrawn) The guidewire device according to claim 45, wherein each joining element is a discrete element having a width of 0.1 to 0.5 mm and a length of 0.1 to 1.5 mm.

52. (Withdrawn) A process for forming and intracorporeal device comprising;
forming a plurality of joining elements on a helically wound coil having a plurality of windings that define an outer perimeter and form a coil length, wherein the joining elements are disposed on only a portion of the outer perimeter and along the coil length and each joining element couples two coil windings.

53. (Withdrawn) The process according to claim 52, wherein the forming a plurality of joining elements comprises applying thermal energy to the coil.

54. (Withdrawn) The process according to claim 52, wherein the forming a plurality of joining elements comprises applying laser energy to the coil.

55. (Withdrawn) The process according to claim 52, wherein the forming a plurality of joining elements comprises applying laser diode soldering to the coil.

56. (Withdrawn) The process according to claim 52, wherein the forming a plurality of joining elements includes forming at least 10 elements disposed along the coil length.

57. (Withdrawn) The process according to claim 52, wherein the forming a plurality of joining elements includes forming a non-uniform joining element pattern along the coil length.

58. (Withdrawn) The process according to claim 57, wherein the forming a plurality of joining elements includes forming a plurality of joining elements that has a density of joining elements per unit coil length that decreases along the coil length.

59. (Withdrawn) The process according to claim 52, wherein the forming a plurality of joining elements includes forming a uniform joining element pattern along the coil length.

60. (Withdrawn) The process according to claim 52, wherein the forming a plurality of joining elements includes forming a plurality of joining elements wherein each joining element couples 3 to 10 coil windings.

61. (Withdrawn) The process according to claim 52, wherein the forming a plurality of joining elements includes forming discrete elements wherein each discrete element is aligned orthogonal to the windings.

62. (Withdrawn) The process according to claim 52, wherein the forming a plurality of joining elements includes forming discrete elements wherein each discrete element has a width of 0.1 to 0.5 mm and a length of 0.1 to 1.5 mm.

63. (Withdrawn) A product produced by the process of claim 52.